ORIGINAL RESEARCH PAPER

Management

IMPACT OF FINANCIAL LEVERAGE ON COMPANYS' PERFORMANCE: A STUDY OF NIFTY ENERGY INDEX COMPANIES

KEY WORDS: Financial Leverage, Return on assets, Return on equity, correlation coefficient

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ABSTRACT

The objective of the present research is to understand the concept of financial leverage, return on assets and return on equity and its impact on performance of the firms listed at National Stock Exchange, India. A sample of ten companies energy sector representing the NIFTY energy index have been chosen for the study. Financial leverage is measured through short term debt ratio, long term debt ratio and total debt ratios and firm's performance is measured through return on equity (ROE) and return on assets (ROA). Pearson's correlation coefficient and Linear Regression analysis was used to study the relationship. The impact was studied for each measure of financial leverage factor on both the performance measures of the company. The study found that the overall relationship between financial leverage and firm's performance have given mixed results.

1.INTRODUCTION

The financial managers will take number of decisions to improve the performance of the companies and the important and crucial decision is regard to capital structure which maximizes the firm's value. The proportion of debt and equity used in financing companies' assets is defined as capital structure. The mix of long term debt on which interest and principal payments must be made, and equity in the form of common and preferred stock, which the company uses to finance its operations is capital structure. This capital structure affects both the risk and returns of the company and is directly related to leverage, which is also sometimes called as gearing. Raising capital through various debt sources rather than equity is financial leverage. The debt holders are eligible to get interest and equity owners share the earnings of the company. Hence It is important to analyze the companies' ability to clear its long term debt obligations when they are due. This ability will be mostly affected by the amount of long term debt the company has in relation to equity. Hence, when the companies' rate of return on its invested capital (ROA) is more than the interest rate on its debt, the company can increase its investors return (ROE) by financing the growth of company operations through borrowed capital.

Financial leverage is a measure of how much firms use equity and debt to finance its assets. A company can finance its investments by debt and equity. The company may also use preference capital. The rate of interest on debt is fixed irrespective of the company's rate of return on assets. The financial leverage employed by a company is intended to earn more on the fixed charges funds than their costs. As debt increases, financial leverage increases. The basic reason for choosing this study is to know what extent the companies are successful in using financial leverage to magnify the shareholders' return under favorable economic conditions.

2.REVIEW OF LITERATURE

Various research papers related to financial leverage and its impact on performance of the company have been reviewed under this section.

Nhung Thi Hong Bui (2017) observed the impact of debt ratios on the company performance in his study and the result of the study revealed that there were strong negative impacts of financial leverage on performance of the firm.

Huang and song (2016) found that there was negative relationships between long term debt and return on assets and also between all liabilities and return on assets.

Nasrollah (2015) examined the effect of financial leverage variegation on income and the earning of the management. Their findings shows that financial leverage has an impact on the earnings management of the company.

Jeliks (2014) studied the effect of financial leverage , free cash flow and firm growth on earning management and the results shows that the company have knowledge and an experience over five year on increasing in the financial leverage which compare to those who had performed less earnings management and high leverage degree.

Ujah and Brusa (2014) proposed that the financial leverage and cash flow impact the degree to which institutions control their earning. They saw that it based on economic group or Industry Company, which related to their degree of managed earning alter.

In 2013, Tong and Green found out that there was a negative relationship between profitability and gearing. Their result was that there is a positive relation between past dividends and current debt level. At the end according to their outcomes it showed that there is weak negative correlation between past dividends and investment.

One of the important studies which were on 2012 by Akhtar which check the relationship between financial leverage and financial performance evidence from fuel and energy sector of Pakistan. The outcome of the study indicate that the perception that financial performance have positive relationship among leverage and the financial performance while comparing with debt to equity ratio. On the other side, the gearing ratio indicator negative relationship with leverage indicators.

Based on a study by Bancel and Mittoo (2004) and Brounen, de Jong and Koedijk (2006) using many sample sizes, different European countries and different kind of companies, used identical questionnaires to know the leverage in Europe. It is evident from the study that the timing of issuing debt or equity based on interest rates and market value is the most important to determinant level of leverage, they used different theoretical explanations for their findings.

3.Objectives of the study

a. To examine the effect of debt ratios (short term, long term and total debt) on return on assets **(ROA)** of companies

listed under NIFTY Energy Index.

b. To investigate the impact of debt ratios (short term, long term and total debt) on return on equity **(ROE)** of companies listed under NIFTY Energy Index.

4.METHODOLOGY OF THE STUDY

The researcher used statistical methods like Pearson correlation and Multiple Linear Regression techniques to study the relationship between the dependent variable and various independent Variables. The degree of leverage was measured using Short-Term Debt to Total Assets Ratio (STDTOTA), Long-Term Debt to Total Assets Ratio (LTDTOTA) and Total Debt to Total Assets Ratio (TDTOTA). The companies performance was measured using Return on Assets (ROA) and Return on Equity (ROE). The Debt ratios calculated were considered as independent varaiables and ROE and ROA were considered as dependent variables. The SPSS was used to extract the results of the statistical techniques.

5.Data Analysis Technique

The requisite data congregated form the consistent sources has been analyzed using the statistical tools of descriptive analysis, Pearson's correlation coefficient, multiple regression analysis

5.1 Results of Pearson's Correlation between ROA and Debt Ratios

Table 5.1 Correlation Coefficient between ROA and Debt Ratios

		ROA	STDTOTA	LTDTOTA	TDTOTA
ROA	Pearson Correlation	1	.100	-.672**	-.629**
	Sig. (2-tailed)		.324	.000	.000
	N	100	100	100	100
STDTOTA	Pearson Correlation	.100	1	-.390**	.289**
	Sig. (2-tailed)	.324		.000	.003
	N	100	100	100	100
LTDTOTA	Pearson Correlation	-.672**	-.390**	1	.769**
	Sig. (2-tailed)	.000	.000		.000
	N	100	100	100	100
TDTOTA	Pearson Correlation	-.629**	.289**	.769**	1
	Sig. (2-tailed)	.000	.003	.000	
	N	100	100	100	100
**. Correlation is significant at the 0.01 level (2-tailed).					

The Table 5.1 displays the association between independent factors (short term debt to total assets, long term debt to total assets and total debt to total assets) and dependent factor (return on assets). Primarily, it is pragmatic from the above analysis that there is significant negative correlation between long term debt to total assets variable and return on assets at 0.01 level. It means variations occurred in the long term debt to total assets variable have negative influence on the earning variable return on assets. Secondly, there is a significant negative correlation between total debt to total assets variable and return on assets at 0.01 level. It indicates that any deviations takes place among the total debt to total assets variable will create a negative impact on the return on assets variable. Lastly it is found that there is no significant relationship between short term debt to total assets variable and return on assets. It indicates that there is no impact of short term debt to total assets variable on return assets.

5.2 Results of Pearson's Correlation between ROE and Debt Ratios

Table 5.2 Correlation Coefficient between ROE and Debt Ratios

		ROE	STDTOTA	LTDTOTA	TDTOTA
ROE	Pearson Correlation	1	.377**	-.218*	.036
	Sig. (2-tailed)		.000	.030	.726
	N	100	100	100	100
STDTOTA	Pearson Correlation	.377**	1	-.390**	.289**
	Sig. (2-tailed)	.000		.000	.003
	N	100	100	100	100
LTDTOTA	Pearson Correlation	-.218*	-.390**	1	.769**
	Sig. (2-tailed)	.030	.000		.000
	N	100	100	100	100
TDTOTA	Pearson Correlation	.036	.289**	.769**	1
	Sig. (2-tailed)	.726	.003	.000	
	N	100	100	100	100
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

From the Table 5.2, it is identified that there is a significance positive relationship between short term debt to total assets variable and return on equity at 1% level. It means, any fluctuations takes place in the short term debt to total assets variable will generate a positive change in the return on equity variable. It also identified that there is a significant negative correlation between long term debt total assets variable and return on equity at 5% level. Further it depicts that there is no significance relationship between total debt to total assets variable and rerun on equity. It means a change in total debt to total assets variable does not lead to any change in return on equity.

5.3 Results of Multiple Linear Regression Analysis between ROA and Debt Ratios

Table 5.3 Multiple Linear Regression Analysis between ROA and Debt Ratios

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		.694[a]	.482	.471	.0230749	
a. Predictors: (Constant), TDTOTA, STDTOTA						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.116	.010		11.009	.000
	STDTOTA	.096	.024	.307	4.027	.000
	TDTOTA	-.156	.017	-.718	-9.401	.000
a. Dependent Variable: ROA						

The Table 5.3 displays the association amid dependent variable (return on assets) and independent variables (short term debt to total assets and total debt to total assets). The multiple correlations coefficient (R) value measured using multiple linear regression method is 0.694. It specifies that there is a correlation between dependent variable and independent variables. It is identified that return on assets is influenced by factors short term debt to total assets and total debt to total assets. The value of R square, which is a coefficient of determinants, is 48.2%, which stipulates that the probabilities of deviations in the return on assets due to dependent variables short term debt to total assets and total debt to total assets is only 48.2% and disparities in the return on assets due to other variables which are not mentioned under present study is 51.8%. Practice of this adjusted degree leads to a reviewed evaluation that 47.1% of the variability in return on assets can be elucidated by the two independent variables under study and the residual 52.9% discrepancy in the return on assets is elucidated by other variables which are not specified under present study.

The Table 5.3 also shows standardized regression coefficients below the heading "Standardized Coefficients Beta". These coefficients are steady so that they measure the variation in the reliant variable in units of its standard deviation when the descriptive variable increases by one standard deviation. It is apparent from the above regression table that the independent variables short term debt to total assets and total debt to total assets are significant with the return on assets.

5.4 Results of Multiple Linear Regression Analysis between ROE and Debt Ratios

Table 5.4 Multiple Linear Regression Analysis between ROE and Debt Ratios

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385[a]	.148	.130	.0633147

a. Predictors: (Constant), TDTOTA, STDTOTA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.063	.029		2.182	.032
	STDTOTA	.269	.066	.400	4.088	.000
	TDTOTA	-.037	.046	-.080	-.820	.414

a. Dependent Variable: ROE

The Table 5.4 exhibits the relationship among dependent variable (return on equity) and independent variables (short term debt to total assets and total debt to total assets). The multiple correlations coefficient (R) value measured using multiple linear regression method is 0.385. It specifies that there is a weak correlation between dependent variable and independent variables. It is acknowledged that return on assets is influenced by factors short term debt to total assets and total debt to total assets to a very less extent. The value of R square, which is a coefficient of determinants, is 14.8%, which specifies that the probabilities of deviations in the return on equity due to independent variables short term debt to total assets and total debt to total assets is 14.8% and disparities in the return on equity due to other variables which are not mentioned under present study is 85.2%. Practice of this adjusted degree leads to a reviewed evaluation that 13.0% of the variability in return on equity can be elucidated by the two independent variables under study and the residual 87.0% discrepancy in the return on equity is elucidated by other variables which are not specified under present study.

The Table 5.4 also conveys standardized regression coefficients below the heading "Standardized Coefficients Beta". These coefficients are steady so that they measure the variation in the reliant variable in units of its standard deviation when the descriptive variable increases by one standard deviation. It is apparent from the above regression table that the independent variables short term debt to total assets has significant relativeness with the return on assets.

6.RECOMMENDATIONS

It is recommended that management of the company should confirm that financing decisions taken by them from time to time must be in consonance with the objective of shareholders wealth maximization. The proportion of debt used in the total fiancé should be ideal so that there is a maximum possibility to use firm's assets. In the process of sustaining principal agent relationship, the agent must be in line with the achievement of principal's objective of maximum returns on equity. Moreover it is sporadic for any company to hinge on only equity finance and thus management should pursue other sources of finance available in the market which may be in contrast to the interest of equity shareholders. Thus management should take measure to preserve financial leverage in such a way that enriches company value to the owners by way of maximizing return on equity. Also the management should observe interest rates of debt to evade company liquidation in mere future. Finally it is also suggested that further research studies need to emanate on this topic covering various sectors of the economy with additional dependent and independent variables.

7.CONCLUSION

In the process of crossing over various phases of economic cycle, the researcher delved in to this current research study, impact of financial leverage on earnings of energy companies listed under NIFTY energy index with a view to proffering recommendations on how this energy companies can be revolved from the position of doom to boom in the maximization of their earnings which is the goal of all organizations. The information obtained from the valid sources has been analyzed accordingly and conclusions are established on it. There is a significant negative correlation between return on assets and long term debt to total assets and total debt to total assets. It designates that an increase in short term debt and total debt leads to decrease in the value of return on assets. It also found that there is a significant positive relationship between short term debt to total assets and return on equity. The short term debt has profound impact on the return on equity. Furthermore, the value of R square, which is a coefficient of determinants, is 48.8%, which stipulates that the probabilities of deviations in the return on assets due to independent variables short term debt to total assets and total debt to total assets is only 48.2% and disparities in the return on assets due to other variables which are not mentioned under present study is 51.8%. Likewise The value of R square, which specifies that the probabilities of deviations in the return on equity due to independent variables short term debt to total assets and total debt to total assets is 14.8% and disparities in the return on equity due to other variables which are not mentioned under present study is 85.2%.

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